

Remarks :

Applicant thanks the Examiner for his thorough case examination and submits the following:

Claim Rejection-35USC 112

Claims 10-14 have been re written. Claims 10-14 are believed to claim steps for performing a function.

Claim Rejections – 35 USC 102

Examiner rejected claims 10-18 as being anticipated by Atzberger (5,140,759).

Atzberger discloses a pneumatic (air) devise for excavating and removing material such as soil.

The applicant's present invention uses water for excavation and a method of restricting the vacuum conduit inlet orifice in order to create clogging at the restriction. The suction inlet is rolled inwardly to a size which is less than the size of the vacuum conduit. A method that Atzberger teaches against. Also, the Atzberger air venture arrangement will not work as described if water is used instead of air. Also, the applicants restriction of the vacuum conduit suction inlet creates what Atzberger is trying to avoid.

Atzberger specifically defines his excavation means as air and his anti clogging means as an enlarged unrestricted vacuum inlet (Summary of the invention line 50-54 "The annular member which is secured within the distal end of the removal tube and contains the nozzles has a relatively large central opening which minimizes clogging of the removal conduit").

air for aspirating by use of an air venture effect. Atzberger's intention is to patent a vacuum hose with an arrangement of air nozzles arranged around the inside of the vacuum hose inlet. As shown in figure 2 the air nozzles are located around the inside of the vacuum conduit inlet. As noted on lines 64-68 of his "Description of the Illustrated Embodiment" "the nozzles 16 and 17 are located along the periphery of the housing 5 so that the annular member 12 has an unobstructed central opening of substantial size, thus minimizing clogging of the device." Atzberger purposely teaches that the inlet inside diameter 12 must be of a substantially large size so as not to reduce the inlet opening size below that of the vacuum hose or conduit. Atzberger teaches just the opposite of the current patent application. Atzberger's vacuum conduit inlet circumference is as large or larger than the vacuum hose so as not to clog the inlet to the vacuum conduit . Atzberger's air nozzles are located on the inside of the vacuum conduit inlet. Atzberger does not want to cause a clogging effect at the inlet of the vacuum conduit. The smallest diameter is his venture which is as large as his vacuum hose inside diameter.

Gilman 6,470,605 does use water for excavation, but places the spray nozzles inside the vacuum conduit. Gilman also increases the inlet size of the vacuum conduit so as to accommodate the spray nozzles while simultaneously maintaining a non-restricted suction inlet size which is equal to or greater than the vacuum conduit. Reference Fig 4.

Applicants patent teaches & claims a novel & versatile vacuum conduit suction inlet restriction to cause clogging at said suction inlet and has water spray nozzles attached to the outside of said vacuum conduit suction inlet. The water spray nozzles are directed to impinge earthen material in order to make it vacuum able. Thus applicants invention:

- 1.Uses an irregular indentation or offset in the vacuum conduit inlet circumference in order to cause clogging at the entrance of

the vacuum conduit of any object that is too large in size to easily continue through the remaining vacuum hose or conduit.

Dislodging a rock stuck half way through a vacuum hose is very time consuming. It is easier and quicker to remove a large rock from the inlet of the vacuum conduit. A second objective of the current patent application is to swedge or use a bell reduction at the vacuum conduit inlet circumference to restrict objects that are too large in size to easily continue through the remaining vacuum conduit. A third objective of the current patent application is to use the indentation or offset in the vacuum conduit inlet circumference as a location for positioning a water nozzle on the outside of the vacuum conduit suction inlet circumference. A forth objective of the current patent application is for the nozzle to be a water spray nozzle positioned so as to direct the pressurized water against the dirt that is to be emulsified and vacuumed.

Atzberger does not disclose a restriction at the inlet of the vacuum conduit. Atzberger does not disclose a means of managing a clogging situation. Atzberger does not disclose a water nozzle. Atzberger does not disclose a nozzle located on the outside of the vacuum conduit circumference. Atzberger does not disclose an indentation or offset in the vacuum conduit circumference whose purpose is to both restrict large objects from entering the vacuum hose and to house a nozzle.

“A claim is anticipated [under 35 USC 102 (b)] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” Verdegaal Bros. vs. Union Oil Co. of California, 2 U.S.P.Q. 2d1051, 1053 (Fed. Cir. 1987), (emphasis added). See M.P.E.P. 2131.

While an embodiment of the invention has been illustrated, it should be understood that numerous variations and modifications will undoubtedly become readily apparent to those skilled in the art.

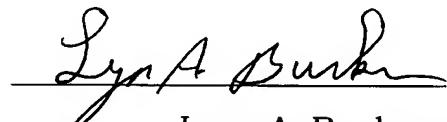
Accordingly, the precise design and structure of the invention should not be limited to that depicted in the drawings and description, but rather is defined in the claims appended hereto.

It is believed that claims 10-18 are in a condition of allowance.

Conditional Request for Constructive Assistance

Applicant has amended the claims of this application so that they are proper, definite, and define novel structure which is also unobvious. If, for any reason this application is not believed to be in full condition for allowance, applicant respectfully request the constructive assistance and suggestions of the Examiner pursuant to M.P.E.P. 2173.02 and 707.07(j) in order that the undersigned can place this application in allowable condition as soon as possible and without the need for further proceedings.

Respectfully submitted,



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